

APPLICANT(S): TZIDON, Aviv et al.  
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### AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1-39. (Cancelled)

40. (New) An automated positioning system for determining the angular position of a vehicle with respect to a predetermined path, using at least one beam sweeping across at least a sector, said beam generated by at least one beacon whose position relative to the predetermined path is known, the system comprising:

at least one electro-optical sensor onboard the vehicle for detecting said at least one beam;

and

a logic circuitry on board the vehicle for determining the angular position of the vehicle with respect to the predetermined path.

41. (New) The system as claimed in claim 40, wherein the logic circuitry comprises a processor.

42. (New) The system as claimed in claim 40, wherein the logic circuitry is adapted to time detection of said at least one beam by the sensor.

43. (New) The system as claimed in claim 40, wherein the logic circuitry is adapted to determine a sweeping direction of said at least one beam across the sensor.

44. (New) The system as claimed in claim 40, wherein said at least one electro-optical sensor comprises two sensing elements so as to allow determining the sweeping direction of said at least one beam as it sweeps across the sensor.

45. (New) The system as claimed in claim 40, wherein said at least one electro-optical sensor is adapted to distinctly detect different optical characteristics of said at least one beam.

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46. (New) The system as claimed in claim 40, wherein said at least one electro-optical sensor is provided with a filter.

47. (New) The system as claimed in claim 46, wherein said filter is selected from a group comprising: polarizing filter, wavelength filter.

48. (New) The system as claimed in claim 40, further comprising at least one off board beacon whose position relative to the predetermined path is known for generating said at least one beam sweeping across at least a sector.

49. (New) The system as claimed in claim 48, wherein said at least one beacon is adapted to generate said at least one beam sweeping across at least said sector back and forth.

50. (New) The system as claimed in claim 48, wherein said at least one beacon comprises a single beacon.

51. (New) The system as claimed in claim 48, wherein said at least one beacon comprises two beacons.

52. (New) The system as claimed in claim 48, wherein said at least one beacon generates two synchronized beams sweeping across said sector.

53. (New) The system as claimed in claim 52, wherein said at least one beacon generates two synchronized beams sweeping in opposite directions across said sector.

54. (New) The system as claimed in claim 48, wherein said at least one beam generated by said at least one beacon is characterized by optical characteristics so as to allow determining of the sweeping direction or azimuth information associated with the beacon.

55. (New) The system as claimed in claim 54, wherein the optical characteristics are selected from a group of optical characteristics: polarization, wavelength, intensity, amplitude modulation frequency, amplitude modulation contrast.

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56. (New) The system as claimed in claim 48, wherein said at least one beam generated by said at least one beacon is characterized as spanning entire said at least a sector and characterized by distinct optical characteristics of specific zones so as to allow determination of their relative direction with respect to the beacon.

57. (New) The system of claim 40, wherein the logic circuitry further generates control commands for controlling the maneuvering actuators of the vehicle.

58. (New) The system of claim 40, wherein the vehicle is selected from a group comprising: an unmanned aerial vehicle, a naval vessel, a land vehicle.

59. (New) An automated positioning method for determining the angular position of a vehicle with respect to a predetermined path, using at least one beam sweeping across at least a sector, said beam generated by at least one beacon whose position relative to the predetermined path is known, the method comprising:

detecting said at least one beam by at least one electro-optical sensor onboard the vehicle;

and

determining the angular position of the vehicle with respect to the predetermined path by a logic circuitry on board the vehicle.

60. (New) The method as claimed in claim 59, comprising timing detection of the beam by the sensor to determine the relative position of the vehicle with respect to a specific alignment relative to the beam.

61. (New) The method as claimed in claim 59, comprising determining a sweeping direction of said at least one beam across the sensor.

62. (New) The method as claimed in claim 59, wherein said at least one sensor comprises two sensing elements, the method comprising determining the sweeping direction of said at least one beam as it sweeps across the sensor.

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63. (New) The method as claimed in claim 59, comprising distinctly detecting different optical characteristics of said at least one beam.

64. (New) The method as claimed in claim 59, further comprising providing at least one off board beacon whose position relative to the predetermined path is known for generating said at least one beam sweeping across at least a sector.

65. (New) The method as claimed in claim 64, comprising generating by said at least one beacon said at least one beam that sweeps across at least said sector back and forth.

66. (New) The method as claimed in claim 64, wherein said at least one beacon comprises a single beacon.

67. (New) The method as claimed in claim 64, wherein said at least one beacon comprises two beacons.

68. (New) The method as claimed in claim 64, comprising generates two synchronized beams sweeping across said sector by said at least one beacon.

69. (New) The method as claimed in claim 68, wherein said two synchronized beams sweep in opposite directions across said sector.

70. (New) The method as claimed in claim 64, comprising characterizing said at least one beacon by optical characteristics so as to allow determining of the sweeping direction or azimuth information associated with the beacon.

71. (New) The method as claimed in claim 70, wherein the optical characteristics are selected from a group of optical characteristics: polarization, wavelength, intensity, amplitude modulation frequency, amplitude modulation contrast.

72. (New) The method as claimed in claim 64, comprising characterizing said at least one beam generated by said at least one beacon as spanning entire said at least a sector and

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characterized by distinct optical characteristics of specific zones so as to allow determination of their relative direction with respect to the beacon.

73. (New) The method of claim 59, comprising generating control commands by the logic circuitry for controlling the maneuvering actuators of the vehicle.

74. (New) The method of claim 62, wherein the vehicle is selected from a group comprising: an unmanned aerial vehicle, a naval vessel, a land vehicle.